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September 28, 2004

03-Yub-5512,5714,5715
03-0A29U4

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in YUBA COUNTY NEAR LINDA AT 1403 FURNEAUX ROAD AND AT 5330 ARBOGA ROAD AND AT 1001 NORTH BEALE ROAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on October 19, 2004.

This addendum is being issued to revise the Project Plans and the Notice to Contractors and Special Provisions.

Project Plan Sheet 4 is omitted. Half-sized copy of the omitted sheet is attached for addition to the project plans.

Project Plan Sheet 11 is duplicated.

Project Plan Sheets 293, 294 and 295 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 12-11.02, "FUEL ISLAND EQUIPMENT," is revised as attached.

To Proposal and Contract book holders:

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

03-Yub-5512,5714,5715
03-0A29U4

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

12-11.02 FUEL ISLAND EQUIPMENT

PART 1.- GENERAL

SUMMARY

Scope.--This work shall consist of furnishing and installing fuel island equipment and systems including double wall underground fuel storage tanks, tie down systems, fuel distribution piping, fuel pumps, fuel dispensers, vapor recovery system, air and water service, fire extinguishers, fuel tank/piping monitoring system, provisions necessary for the addition of a future card lock system and enhanced leak detection certification. All work shall be done in accordance with the details shown on the plans and these special provisions. Foundations, supports, mechanical and electrical work, and all other work incidental to, and necessary for, the proper installation and operation of the items of equipment shall conform to the requirements specified for similar work elsewhere in these special provisions.

Permits to operate.--The Contractor shall provide all required permits for Vapor Recovery Systems for the gasoline fuel system in accordance with the requirements of the Feather River Air Quality Management District, and all required permits to install and operate underground storage tanks in accordance with the requirements of the California Code of Regulations (CCR), Title 23, Chapter 16, and the Yuba County Office of Emergency Services regulations, and shall perform all the required tests associated with the permit process. Such permits shall be posted under glass at the site of the work before any equipment is installed.

SUBMITTALS

Product data.--Manufacturer's descriptive data for all equipment, including installation instructions, shall be submitted for approval.

Manufacturer's descriptive data shall be submitted for the following:

Underground fuel storage tanks
Tank hold-down system
Fuel tank/piping monitoring system
Enhanced leak detection certification process & proceedures
Fuel tank fittings and accessories
Fuel distribution pipe systems and accessories
Fuel pumps and accessories
Air and water wells
Fire extinguishers
Warning signs

Working Drawings.—Working drawings for fuel island shall be submitted for approval. Working drawings shall include the location of all underground fuel island piping and conduit including fuel delivery pipe, vapor recovery pipe, vent pipe, vacuum pipe that is part of the fuel tank/piping monitoring system, enhanced vapor recovery pipe, and electrical power and control conduits.

CLOSEOUT SUBMITTALS

Operation and maintenance manuals.--Prior to the completion of the contract, 3 identified copies of the operation and maintenance instructions with parts lists for the equipment specified herein shall be delivered to the Engineer at the job site. The instructions and parts lists shall be in a bound manual form and shall be complete and adequate for the equipment installed. Inadequate or incomplete material shall be returned. The Contractor shall resubmit adequate and complete manuals at no expense to the State.

WARRANTY

Warranties and guarantees.--Manufacturer's warranties and guarantees for materials or equipment used in the work shall be delivered to the Engineer at the job site prior to acceptance of the contract.

PART 2.- PRODUCTS

Underground Fuel Tanks

Underground fuel tanks shall be double wall type constructed of glass fiber reinforced polyester resin and shall be constructed in accordance with the requirements of the California Code of Regulations, Title 23, for underground storage of hazardous substances.

The tanks shall be fabricated and tested in accordance with UL and NFPA standards. The tanks shall be UL listed and shall have the labels intact.

Storage tank shall be provided with connection points for the annular space leak detector, the fill and vapor recovery connections, and the extractor assembly, as shown on the plans.

A steel plate shall be provided at the bottom of each tank beneath each access manway

Hold Down System

Underground fuel tanks shall be provided with a hold-down system to prevent buoyancy forces from lifting the tank. Portions of the hold-down system in contact with the tank shall be furnished by the tank manufacturer. The complete installation of the hold-down system shall conform to the tank manufacturers recommendations.

Piping Sump

Each underground fuel tank shall be provided with 2 double wall piping sumps. Piping sump shall be bonded to the tank according to the tank manufacturers recommendations. Piping sump shall include a water tight cover. The piping sump shall centered beneath a traffic rated cover and frame as specified elsewhere in these special provisions.

Fill Assemblies

Fill assemblies shall consist of an overfill protection device, draindown mechanism, spill containment, locking cap, drop tube and traffic rated manhole and cover. The fill assemblies for gasoline shall be California Air Resources Board certified.

The overfill prevention valve shall be positive shut-off valve which will automatically stop the delivery of fuel when a small unfilled volume remains in the tank. A manual or automatic mechanism shall be included to permit the product remaining in the delivery hose to be drained into the tank. Operation shall be reliable regardless of the delivery flow rate.

Extractor Assembly

Extractor assembly shall consist of an angle check valve, suction stub strainer, extractor pipe cap with wrench.

The angle check valve shall be a gasketed double poppet with extractable cage, brass trim and strainer, 100-millimeter threaded tank connection, and 50-millimeter female inlet and outlet connections.

Suction stub strainer shall be brass body and minimum number 8 wire mesh.

Extractor pipe cap shall be 50-millimeter, female pipe thread, and shall be removable by using the extractor wrench provided. The extractor wrench shall also be suitable for removing the check valve.

Traffic Rated Cover and Frame

All components of the fuel tank requiring access through the concrete cover pad shall be accessible through a traffic rated cover and frame cast into the fuel tank concrete pad.

Pipe and fittings

All underground fuel piping, vapor piping, vent piping and fittings, shall be reinforced thermosetting resin pipe (RTRP) machine made with glass fiber reinforced epoxy resin. RTRP shall conform to NFPA standards for underground piping for petroleum products and shall be listed and labeled for said use. Pipe and fittings shall be marked with manufacturer's name, nominal size and RTRP classification type, grade and class.

Fittings for double wall secondary containment piping shall be 2 piece, glued and bolted together in accordance with the RTRP manufacturer's recommendations.

Vertical vent piping shall be Schedule 40 galvanized steel pipe; ASTM Designation: A 53 or A 120 with 1040 kPa galvanized malleable iron fittings. The weight of the zinc coating shall not be less than 90 percent of that specified in ASTM Designation: A 53 or A 120.

Flexible connector

Flexible connector shall be flexible hose, listed and labeled for type of fuel, Type 316 stainless steel braided cover with lay line and Teflon liner, ductile iron or cadmium plated steel NPT fittings with corrosion resistant coating. Braided cover shall be attached by stainless steel clamps. Working pressure shall be minimum 350 kPa, burst pressure shall be minimum 1380 kPa.

Under Pump Sump

Each dispenser shall be provided with a double wall under pump containment sump. Sump shall have an open top and a piping seal. Sump shall be sized to match the dispenser selected.

Fuel pumps

Fuel pumps shall have computer or non-computer systems, ground supported hose retractors, automatic shut-off nozzles, l000 liter registers, 100 000 liter totalizers, and shall be supplied with brand panels factory labeled "DIESEL" or "GASOLINE," as applicable. Fuel pump assemblies shall be UL listed and shall be suitable for 115-volt service.

The fuel pumps shall be single product, dual hose type with two 0.25 kW motors with internal overload protection. Fuel pumps with one 0.55 kW motor may be submitted as an alternative with modified electrical schematic. Pump shall have a factory installed 10:1 pulser for each hose. Gasoline pump shall be CARB certified and fitted for Phase-2 vacuum assisted vapor recovery.

Gasoline nozzles and hoses shall be vapor recovery type. Each gasoline pump outlet shall have 3.7 meters of coaxial hose 20 millimeter diameter. Each diesel pump outlet shall have 3.7 meters of 25 millimeters diameter hose.

Fuel pumps shall be Tokheim, Gasboy, or equal.

Vapor recovery nozzles

Vapor recovery nozzles shall be CARB certified vacuum assisted vapor recovery nozzle with automatic shut-off and swivel. Nozzel and swivel shall be fitted for use with coaxial hose. Nozzle shall be Husky, OPW, Emco Wheaton, or equal.

Diesel nozzles

Diesel nozzles shall have automatic shut-off and swivel, Husky, OPW, Emco Wheaton, or equal.

Tank/Piping Monitoring System

The tank/piping monitoring system shall be a "Pressure/Vacuum Interstitial Monitor" system that is listed in the California State Water Resources Control Board Local Guidance Letter 113 – "List of Leak Detection Equipment and Methods for Underground Storage Tanks." The details on the plans and the requirements in these special provisions are for a vacuum system; a pressure system, or pressure components meeting the above requirements may be used subject to the requirements of Section 5-1.11 Alternative Equipment of the Standard Specifications.

The tank/piping monitoring system shall be a fully integrated, automatic fuel monitoring and management system consisting of a control panel, a vacuum pump and vacuum delivery components, vacuum sensors, tank level (volume) sensors, serial communication interface, audible and visual alarms. The tank/piping monitoring system shall be UL listed for use with hydrocarbon fuels. All system components except the alarm panel shall be intrinsically safe for Class 1, Division 1, Group D hazardous atmospheres.

Each fuel tank annular space and piping sump, piping run, and each dispenser sump shall be monitored by the tank/piping monitoring system. Sensors installed in each of these locations monitor vacuum pressure. A method for identifying the specific tank or sump responsible for any alarm shall be provided as part of the system.

Each fuel tank shall be monitored by an automatic internal tank probe. The tank probe shall measure the level of fuel contained in the tank; the leak detection system shall be capable of reporting the volume of fuel contained in each tank.

The tank/piping monitoring panel shall be capable of generating specific alarms for overfill or low product in each tank and for any vacuum sensor failure. The tank/piping monitoring panel shall be programmed to generate and print out monthly inventory compliance and fuel management reports and shall include automatic system diagnostics. The tank/piping monitoring panel shall be fitted with an RS-232 DB-9 connection to allow serial communication with the automatic fuel control terminal (not part of this contract).

All sensors, cables, conduits, piping, hangers, control and alarms, accessories and appurtenances required for a complete installation per the manufacturer's recommendations shall be furnished and installed by the contractor.

Air and water well

The air and water well shall be a combination recessed box type, and shall have removable reel assembly complete with galvanized steel box, shut-off valves, and locking device.

The air hose shall be 6 mm diameter 10 meter minimum length, with heavy duty air gage with dual foot clip-on truck chuck. The air chuck shall be the clip-on type with a minimum 600 mm length of hose to an in line valve and gage. The water hose shall be 6 mm diameter 7.5 meter minimum length, with a radiator faucet type filler.

Fire extinguisher

Fire extinguisher shall be Underwriters Laboratories or Factory Mutual Laboratories listed, fully charged, dry chemical type, with charge indicator and attached service record tag. Fire extinguisher shall be of the capacity and type rating shown on the plans.

Warning signs

Warning signs shall be sheet steel or aluminum, not less than 1.2 mm thick with a baked enamel coating and shall have black or red letters on a white background.

PART 3.- EXECUTION

INSTALLATION

Tank and pipe installation.—The tanks, piping, bedding and backfilling shall be in accordance with the NFPA standards, the requirements specified in the CCR Title 23, and the manufacturer's recommendations. Piping shall be graded down toward the tanks at a rate of not less than 2 percent without loops or traps. Double wall piping shall be installed where shown on the plans.

The tanks and piping shall be visually inspected for damage at the time of delivery, just prior to installation, and prior to backfilling.

Vapor recovery piping shall be provided from the fuel island to the gasoline tank.

Flexible connectors shall be installed at all pipe to tank and dispenser connections. Flexible connectors shall be installed inside secondary containment piping sump and the under dispenser sump. Penetrations into sumps for pipe and conduits shall be made with fittings approved by the sump manufacturer.

The air and water well box shall be wrapped with 2 layers of 0.75 mm wrapping tape.

Enhanced Leak Detection.—The Contractor shall obtain the services of an independent, third party, enhance leak detection provider listed in the California State Water Resources Control Board Local Guidance Letter 161 – "Enhanced Leak Detection".

Air and water well installation.--Air and water well shall be installed with a pea gravel drainage pocket.

Fire extinguisher installation.--The fire extinguishers shall be installed on the wall with a manufacture supplied wall mounting bracket. Top of extinguisher shall be 1.5 m above fuel island.

Warning signs.--Warning sign sizes, messages, lettering type and size shall be as shown on the plans. Warning signs shall be installed at the locations shown on the plans.

FIELD QUALITY CONTROL

Testing.--Double wall RTRP shall be pressure tested according to manufacturer's recommendations for not less than 4 hours. Testing procedures shall be submitted to the Engineer prior to testing. Tank shall be isolated from piping during pipe pressure tests.

General performance tests to demonstrate the proper operation of the fuel island equipment shall be made by the Contractor in the presence of the Engineer. The pumps shall be tested to verify the delivery rate, 56 LPM without vapor recovery equipment and 30 LPM with vapor recovery equipment. The tank/piping monitoring system shall be tested by venting the vacuum from various system components and observing the operation of the alarm.

The fuel for testing the pumps will be State-furnished as provided under "State-Furnished Materials" in Division 1, "General Requirements," of these special provisions.